REMARKS

The above Amendments and these Remarks are submitted under 35 U.S.C. § 132 and 37 C.F.R. § 1.111 in response to the Office Action mailed May 3, 2005.

Summary of the Examiner's Action and Applicants' Response

The Examiner has rejected Claims 1 and 7 based on Lindqvist, U.S. Patent No. 6,075,430 in view of Tsunemi, U.S. Patent No. 6,392,523. The Examiner has rejected Claims 2, 3, 6, 8, 9, 11, and 12 under 35 U.S.C. § 103(a) as being obvious based on Lindqvist in view of Tsunemi and further in view of Gutierrez, U.S. Patent No. 6,512,175. Applicants respectfully traverse the rejections.

In this amendment, Applicants have amended Claims 1, 2, 7, and 11. After entry of this Amendment, Claims 1-3, 5-9, 11, and 12 remain pending.

Interview Summary

Applicants respectfully thank Examiner Mai for agreeing to a telephone interview on August 9, 2005 during which the Office Action was discussed. The Examiner stated during the interview that the cited prior art do not teach the limitation of coplanar surfaces that is found in all of the independent claims. The Examiner stated that a response must be filed in order to enable her to conduct a further search of the prior art.

Regarding Claim 5, the Examiner acknowledged that the Office Action issued by the former Examiner failed to state any grounds in the Office Action for rejecting this claim. The Examiner stated that she will provide us the basis, if any, for rejecting this claim in a future action.

Response to Rejection of Claims 1 and 7 under § 103(a)

The present specification identifies the particularly difficult problem of removing heat from printed circuit board (PCB) mounted inductors and transformers. (Paragraph [0003]). The operation of the circuit, especially when implemented as a transformer, generates large amounts of heat within the core. It is desirable, therefore, to have the inductive element have a small footprint within improved heat transfer from the core to an adjacent structure. (Paragraph [0012]). The present invention provides an inductive element and a method for forming an inductive element with reduced size and improved heat transfer from the core to the exterior of the inductive element.

(Paragraph [0022]). FIG. 6 illustrates the improved heat flow from the core and ends of an inductive element according to an embodiment of the present invention.

In the Office Action, the Examiner stated that Lindqvist discloses the inductive element claimed in Claim 1, except for the specific rectangular cross-section shape. In applying the Tsunemi reference, the Examiner stated as follows:

> "Tsunemi discloses a surface mounting-type transformer comprising a magnetic core having an elongated rectangular cross-sectional shape, a planar flange on each end of the core, and a coil wound about the rectangular planar core. The planar, rectangular shape shown in Tsunemi makes it possible to attain a surface-mounting-type coil component having an extremely small height and aid in suitably mounting the component on an IC."

The Examiner concluded that, at the time of the invention, it would have been obvious to combine the teachings of Lindqvist and Tsunemi to make the core and flanges into rectangular cross-sectional shapes in order to suitably mount the component on an IC, as claimed in Claims 1 and 7. Applicants respectfully disagree.

Tsunemi discloses a surface-mounting-type inductive element having a winding wound around a rectangular core to define a rectangular surface and having two end portions each having a planar surface. Applicants respectfully submit that Tsunemi does not disclose that the rectangular surface of the winding is **coplanar** with the surface of each end portion planar surface, as claimed in Claims 1 and 7. FIGs. 2-5 in Tsunemi illustrate this point in that these figures show a **gap** between the planar surface defined by the winding and the plane of the end portions. Therefore, Applicants respectfully submit that, in contrast to the structures disclosed in Tsunemi and Lindqvist, the winding wound on the elongated portion of the core, as claimed in Claims 1 and 7, defines a substantially rectangular planar surface that is coplanar with each end portion planar surface. This coplanarity of the rectangular planar surface created by the winding and the end portions, as claimed in Claims 1 and 7, is significant, since this structure facilitates substantially greater heat transfer when the inductive element is surface mounted on an adjacent structure, in contrast to the teachings of Tsunemi and Lindqvist. Applicants respectfully submit therefore that Lindqvist and Tsunemi do not address, let alone solve the heat transfer problem for surface mounted structures

that is solved by the present invention.

Applicants have amended Claims 1, 2, 7, and 11 to replace the term "wherein" with "such that" in order to further emphasize the coplanarity difference discussed above. More specifically, Claims 1, 2, 7, and 11 have been amended to recite that the winding is wound about said elongated portion "... such that said substantially rectangular planar surface is coplanar with each said end portion planar surface." For all of the above reasons, Applicants respectfully submit that Claims 1 and 7 are non-obvious based on Lindqvist and Tsunemi.

Response to Rejection of Claims 2, 3, 6, 8, 9, 11, and 12 under § 103(a)

Regarding Claim 2, the Examiner stated that the structure in Lindqvist and Tsunemi discloses the structure of Claim 2, except for the mounting frame element. The Examiner stated that Gutierrez discloses the mounting frame, as claimed in Claim 2. The Examiner stated that Lindqvist, Tsunemi, and Gutierrez disclose the structure of Claims 2, except for stating that the structure is constructed to enhance heat transfer. The Examiner concluded that, since a recitation of the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations, it is understood that the structure disclosed in Lindqvist, Tsunemi, and Gutierrez would be capable of performing the claimed heat transfer function. Applicants respectfully disagree.

As discussed for Claims 1 and 7 above, Lindqvist and Tsunemi do not teach our suggest the coplanarity of the rectangular planar surface created by the winding and the end portions for enabling the windings to facilitate substantially greater heat transfer when surface mounted on an adjacent structure. Gutierrez also does not contain such teaching or suggestion of the structure, as claimed in Claim 1 and 7. For all of the above reasons, Applicants respectfully submit that Claim 2 is non-obvious based on Lindqvist, Tsunemi, and Gutierrez.

Claims 3 and 6 depend from Claim 2 and are therefore respectfully submitted as being non-obvious based on Lindqvist, Tsunemi, and Gutierrez for the same reasons as above for Claim 2. Claims 8 and 9 depend from Claim 7 and are therefore respectfully submitted as being non-obvious based on Lindqvist, Tsunemi, and Gutierrez for the same reasons as above for Claim 7.

Claim 11 is directed to a method corresponding to Claim 2. Claim 11 is respectfully submitted therefore as being non-obvious based on Lindqvist and Gutierrez for the same reasons as discussed for Claim 2. Claim 12 depends from Claim 11 and is therefore respectfully submitted as

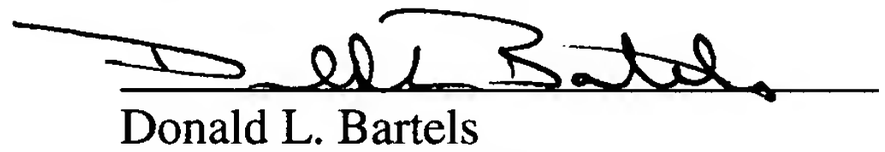
being non-obvious based on Lindqvist, Tsunemi, and Gutierrez for the same reasons as above for Claim 11.

Conclusion

For the above reasons, Applicants respectfully submit that all pending claims, Claims 1-3, 5-9, 11, and 12, in the present application are in condition for allowance. Such allowance is respectfully solicited.

If a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (415) 984-8200.

Respectfully submitted,



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